

UPRIGHT CUSHIONED HELVE HAMMER.

Many years of experience in the manufacture and a thorough knowledge of the wants of the trade have enabled the designers of the upright cushioned helve hammer shown in the accompanying engravings to produce a tool for which they can claim superiority in the

time. The hammer is made of the best material, and the parts are so proportioned as to secure the greatest strength and durability. These hammers, manufactured by Messrs. Bradley & Company, of Syracuse, N. Y., U. S. A., who will furnish further particulars, have been in daily use in many factories for some time, and have given the greatest satisfaction.

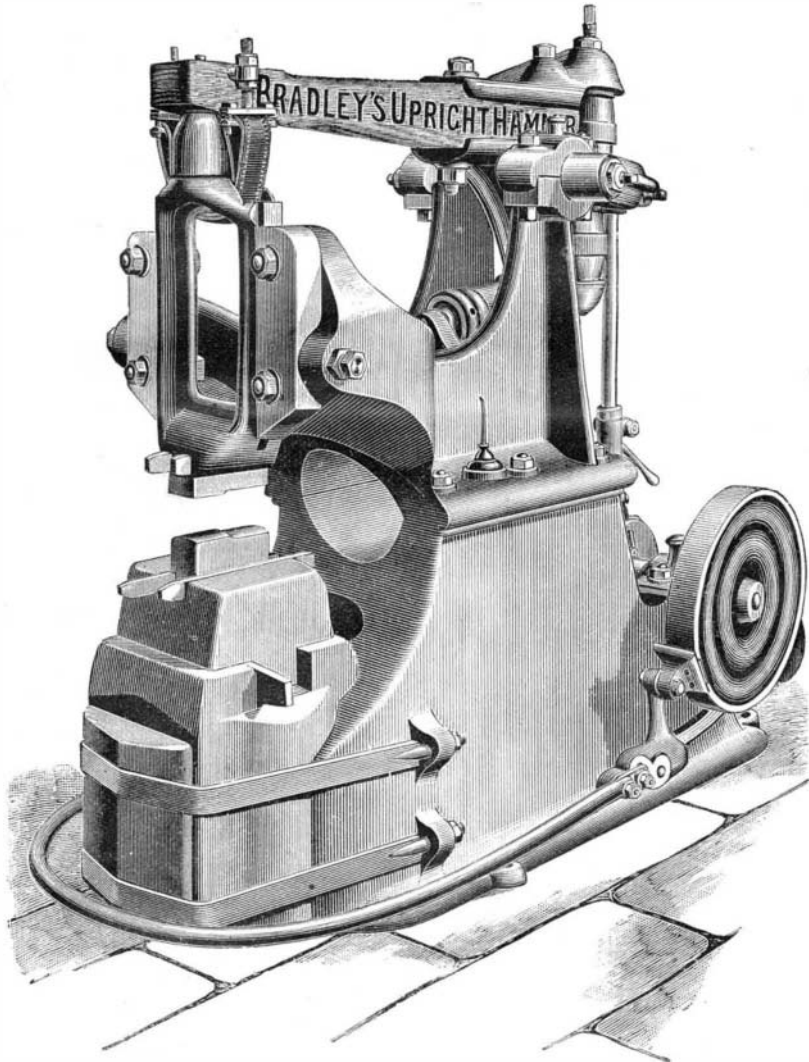


Fig. 1.—THE BRADLEY UPRIGHT CUSHIONED HELVE HAMMER.—FRONT VIEW.

following points: power and accuracy of blow, simplicity and ease of adjustment, range of work, economy of power, and durability.

The hammer is operated by an eccentric at the rear connected by a pitman to the saddle or oscillator carrying the helve, to the forward end of which the hammer head is attached. These parts are plainly shown in Fig. 2. By the use of rubber cushions the force of the blow is multiplied many times, and a degree of elasticity is imparted that effectually removes all danger of breakage, while so thoroughly cushioning the jar that none is perceptible in the working parts of the hammer when the blow is struck. In this way the blow is made to imitate almost exactly the action of a hand hammer. The head gets away from the work instantly after striking, and the piece is not chilled. The difficult blacksmith trick of heating a cold iron rod by repeated blows rapidly delivered is easily performed with this hammer.

Each working part is in full view of the operator, and the whole is so simple in construction and manner of adjustment that the experienced hammersman has no trouble in operating it to its full capacity at once. A matter of great value, when material greatly differing in size has to be successively worked, is that the length of stroke can be instantly adjusted by means of a friction sleeve on the pitman at the rear of the hammer. By a very simple arrangement the keys holding both the upper and lower dies are removed as well as driven in from the front, thus saving time and insuring accurate adjustment of the dies when necessary.

By the use of the friction sleeve on the pitman, the opening between the dies when at rest can be varied from the actual contact to six or seven inches in the smallest size of hammer and twelve to fifteen inches in the larger sizes; these variations can be brought about instantly, thus making the hammer especially valuable in jobbing shops. In making these various changes no other working parts of the hammer have to be adjusted, as the one operation of changing the length of stroke adjusts every other working part at the same

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Wind Pressure of Storms.

During the hearing by the Parliamentary Committee of the case for the promoters of the Tower Bridge over the Thames, Mr. B. Baker, who was called to prove the stability of the proposed structure, gave evidence upon the phenomena of wind pressure as observed by him in connection with the construction of the Forth Bridge. Mr. Baker stated that, from recorded observations in the Firth of Forth, extending over many years, he has come to the conclusion that no pressure at all approaching 65 lb. per square foot can prevail over a surface of any magnitude. He declared that no such pressure has for many years occurred in the Thames Valley; instancing, in proof of this assertion, the number of large gas holders scattered up and down the river side. If a hurricane of 56 lb. to the square foot had encountered any of these structures, Mr. Baker believes they would have been doubled up and blown across London, as they have no power of resistance to external pressure beyond the pressure of the gas from within, which he values at not more than 18 lb. per square foot.

If, therefore, not the slightest damage of this kind has ever been done by wind to any of the London gas holders (which is a fact), it is a demonstration that they have never been exposed to a heavier gale than one of 18 lb. per square foot, or thereabouts. It is Mr. Baker's experience at the Forth Bridge works that a gale registering by his improved instruments not more than 16½ lb. per square foot completely stops all ordinary traffic on the estuary, preventing the running even of powerful ferry boats. Mr. Baker believes that this pressure is rarely exceeded. He declines to place credit in ordinary anemometer readings, which sometimes show extreme velocities; and he points out that trains do not cease running in gales when anemometers will register 46 lb. pressure to the foot, though a pressure of 40 lb. of

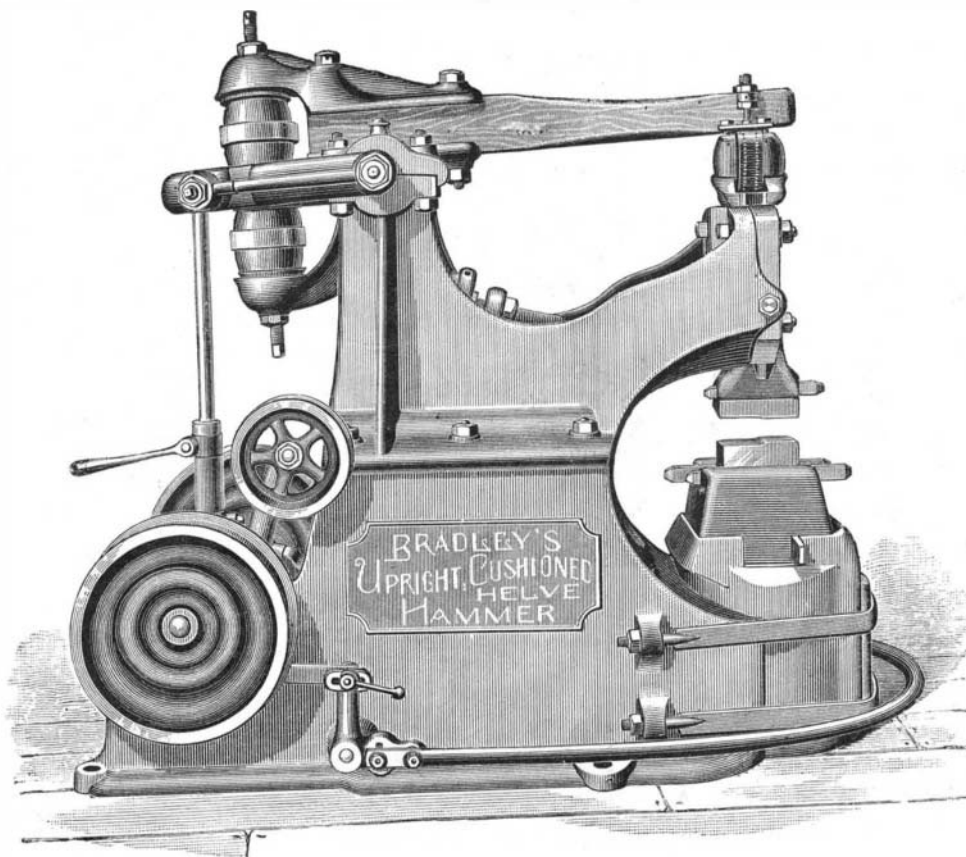
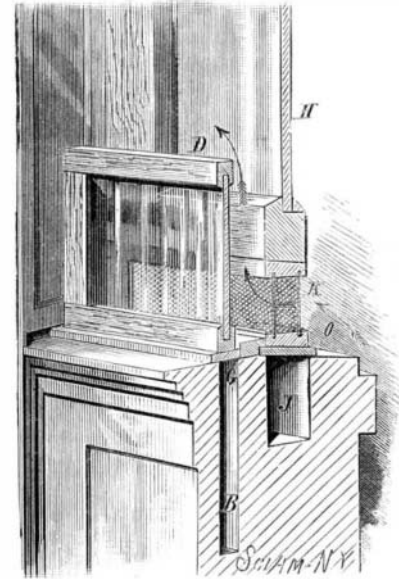


Fig. 2.—THE BRADLEY UPRIGHT CUSHIONED HELVE HAMMER.—SIDE VIEW.

wind per square foot on its exposed side would certainly upset an ordinary train. Any street tramcar would likewise be turned over by a wind pressure of only 20 lb. per square foot. This is a class of accident that rarely happens, but it is not unexampled.

WINDOW SCREEN AND VENTILATOR.

The deflector, D, consists of a wooden frame holding one or more panes of glass, and is adapted to slide into the pocket, B, which extends downward from the upper surface of the inner window sill, and reaches from one jamb to the other. The bar, G, has its ends passed into horizontal grooves in the jambs, and is arranged to slide toward and from the bottom stop bead, and to cover the top of the pocket. Below the lower sash, H, is the pocket, J, formed to receive the sliding screen frame, K, which is provided with both an inner and outer wire netting. The sliding bar, O, serves to cover the pocket, J. The fresh, cool air, entering through the screen, is guided upward by the deflector (as indi-



BRONSON'S WINDOW SCREEN AND VENTILATOR.

cated by the arrows) to cause it to displace the warm air in the upper part of the room, and to prevent it causing annoyance to the occupants of the room. When the device is not in use, it is entirely out of the way in the pockets. To prevent rain from working through the joint between the inner edge of the strip, O, and the bead, the front of the latter is formed with a recess, into which the edge of the strip passes, thus making a tight joint. The device can be applied to any window, and its use will facilitate the ventilating of apartments without creating unpleasant draughts.

This invention has been patented by Mr. J. G. Bronson, of Chicago, Ill.

To Get Rid of Cockroaches.

A correspondent writes as follows: "I beg to forward you an easy, clean, and certain method of eradicating those loathsome insects from dwelling houses. A few years ago my house was infested with cockroaches (or 'clocks,' as they are called here), and I was recommended to try cucumber peeling as a remedy. I accordingly, immediately before bedtime, strewed the floor of those parts of the house most infested with the vermin with the green peel, cut not very thin, from the cucumber, and sat up half an hour later than usual to watch the effect.

Before the expiration of that time the floor where the peel lay was completely covered with cockroaches, so much so that the vegetable could not be seen, so voraciously were they engaged in sucking the poisonous moisture from it. I adopted the same plan the following night, but my visitors were not nearly so numerous—I should think not more than a fourth of the previous night.

On the third night I did not discover one; but anxious to ascertain whether the house was quite clear of them, I examined the peel after I had laid it down about half an hour, and perceived that it was covered with myriads of minute cockroaches, about the size of a flea. I therefore allowed the peel to remain till morning, and from that moment I have not seen a cockroach in the house. It is a very old building, and I can assure you that the above remedy only requires to be persevered in for three or four nights to completely eradicate the pest. Of course it should be fresh cucumber peel every night."

Confectioner's Journal.

Glycerine in Acute Nasal Catarrh.

Cotton saturated in glycerine and introduced into the nares relieves the congestion at once.